

# MEGA MERGERS IN THE SEEDS & AGRO-CHEM INDUSTRY: NIPPING THE SEEDS OF INNOVATION (& SUSTAINABILITY) IN THE BUD?

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*The Seeds and Agro-Chem Industry today is a tightly knit oligopoly with only a handful of global players. Following a detailed assessment, the European Commission recently conditionally cleared three major transactions in the already highly concentrated sector - Chem China and Syngenta, Dow and Du Pont, Bayer and Monsanto – reducing the number of effective global players from six-to-four. Even though the Commission’s decisions are laudatory in terms of their economic assessment of the impact of the transactions on product, price and innovation competition, these merger approvals suggest the following gap in EU Merger Control. Taking pride in its more economic approach, the EU Merger Control in its current form neglects the need to integrate the most fundamental principles of EU law. These principles can neither be easily quantified nor put in a straitjacket of ‘cost/benefit’ or ‘efficiency’ analysis. This article accordingly calls for the need to go back to the Treaty articles and examine how EU Merger Control can effectively meet the larger policy objectives as enshrined in the Treaty articles, such as Article 11 TFEU’s ‘environmental integration rule’, while simultaneously retaining the impression of being based in sound principles of competition law and economics. Incorporation of the principle of sustainable development alongside the well-defined economic principles well aligns with an integrated and holistic approach to policy-making. The approach suggested may lead to a multiplicity of objectives – meaning that if such an approach is indeed adopted, the EU Merger Control may well need to look beyond the narrow construct of ‘efficiency’ and ‘consumer welfare’. A failure to take account of these larger objectives, however, may ironically thwart the EU Merger Control from achieving the very fundamental objective it seemingly aspires to achieve that is ‘consumer welfare’! Consumers being numerous and geographically dispersed experience the collective action problem. In the Bayer/Monsanto merger, despite this typical collective active problem, the Commission received over 55,000 emails, letters and postcards and an uncountable number of tweets on the social networking site Twitter. The citizens, who are also consumers, in their complaints requested the Commission to prohibit the transaction, as they saw the proposed merger being detrimental to ‘human health, food safety, consumer protection, the environment and the climate’. The Commission’s response to these complaints was that even though the said concerns were significant - they nonetheless could not form the basis of merger assessment, which*

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In compliance with the requirements for transparency, I confirm no conflict of interest. This paper represents my opinion based on my academic research and should not be attributed to my academic institution. In addition, it may be useful to add that I am currently conducting academic research on the interface between sustainability and competition and trade law within the framework of Horizon 2020: Making Agricultural Trade Sustainable (MATS) RUR-21-2020.

*needs to be limited to competition issues. As for the issues raised, in the opinion of the Commission, other areas of law such as those dealing with the regulatory system for pesticides and the consumer protection law could well address these other concerns. The dilemma confronting the Commission was whether to assess these transactions within the current framework grounded in well-defined scientific principles of economics (and increasingly econometrics) or in the alternative take account of some qualitative non-price considerations. The Commission evidently resorted to the former option. A decision otherwise would have been subject to intense economic criticism just like the GE/Honeywell decision, wherein the Commission proposed a very novel theory of ‘Archimedean Leveraging’, and prohibited the proposed merger. This means that for a truly effective competition policy and EU Merger Control in particular, the authorities need to ‘re-think, re-design and re-frame’ the notion of competition policy as a ‘system of inter-locking processes’ in the Raworth’s ‘doughnut’.<sup>1</sup> For such a sustainability-driven thinking on innovation, that re-directs the ‘consumption choices available to consumers’ within the sustainable ‘safe and just space for humanity’, there is a visible need to think and reflect upon the ‘double limit of planetary boundaries’ and incorporate it in the everyday philosophy of competition policy.<sup>2</sup>*

## 1 INTRODUCTION

In the 1980’s when genetically engineered crops were first introduced, the market was highly competitive with a number of key players. By the early 90’s, following a series of wave of consolidations, over 80% of the market for agriculture biotechnology was controlled by the ‘Big Six’ firms. Following the recent mega mergers that may be more appropriately referred to as a wave of big-data driven M&As (mergers and acquisitions), the market today is a tight oligopoly comprising of a handful of global players. Notable consolidations in this phase include the global mergers between Chem China and Syngenta, Dow and Du Pont and Bayer and Monsanto. This is not the first wave of consolidation in the industry. There have been earlier notable waves of consolidation. Following three factors, however, make this recent wave particularly worrisome. First, post-consolidation, the seed & agro-chem industry today is a tightly knit oligopoly with little meaningful ‘localized competition’ across different ‘nodes’<sup>3</sup> Second, these firms are vertically integrated (VI) entities that control the entire value chain from R&D in the upstream market to production and distribution in the downstream market. Third, these VI firms also increasingly own the data across the entire value chain – from the data about the genetic information of the seeds to the data about the buyers of the seeds and other agro/chemical products such as fertilizers and pesticides.

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<sup>1</sup> Kate Raworth, ‘A Safe and Just Space for Humanity: Can We Live Within the Doughnut?’ February 2012 *Oxfam Discussion Paper* <[https://www-cdn.oxfam.org/s3fs-public/file\\_attachments/dp-a-safe-and-just-space-for-humanity-130212-en\\_5.pdf](https://www-cdn.oxfam.org/s3fs-public/file_attachments/dp-a-safe-and-just-space-for-humanity-130212-en_5.pdf)> accessed 08 June 2022.

<sup>2</sup> Tomaso Ferrando and Claudio Lombardi ‘EU Competition Law and Sustainability in Food Systems: Addressing the Broken Links’ (February 2019) *Fair Trade Advocacy Office, Brussels* <[http://www.responsibleglobalvaluechains.org/images/PDF/FTAO\\_-\\_EU\\_Competition\\_Law\\_and\\_Sustainability\\_in\\_Food\\_Systems\\_Addressing\\_the\\_Broken\\_Links\\_2019.pdf](http://www.responsibleglobalvaluechains.org/images/PDF/FTAO_-_EU_Competition_Law_and_Sustainability_in_Food_Systems_Addressing_the_Broken_Links_2019.pdf)> accessed 08 June 2022.

<sup>3</sup> Kalpana Tyagi, Promoting Competition in Innovation through Merger Control in the ICT Sector: A Comparative and Interdisciplinary Study, *Springer* (2019) <<https://www.springer.com/gp/book/9783662587836>> on unilateral effects at pp. 55-59. See also references therein.

This emerging dynamics at play challenges the very fundamental principles of how competition authorities assess the impact of the proposed concentration, particularly in the Seed and Agro-chemicals sector. In other words, considering the complexity of the debate and challenges peculiar to the sector, should competition authorities be only concerned with the impact of the proposed merger on competition and innovation? Is it not time to introspect and perhaps re-set the boundaries of competition policy in general and merger control in particular, particularly when sectors as critical as food and agri are under consideration? Considering the critical significance of the sector to ensure that all have access to food and a healthy lifestyle, should the authorities ‘not’ take into account some non-price parameters of competition – such as the sustainable development goal 2, “Zero Hunger” ? Pre-Covid, the world was already suffering from severe food shortages in certain parts of the world. As per estimates by World Food Programme, over 135 million people suffer from “acute hunger largely due to man-made conflicts, climate change and economic downturns”.<sup>4</sup> This number, following the COVID-19 pandemic, has now more than doubled, at close to 300 million. It is feared that by 2030, over 840 million will be affected by this food shortage.<sup>5</sup> The ongoing war between Russia and Ukraine threatens to further break down an already fragile food supply chain.<sup>6</sup>

Within the framework of the Treaty articles, should we not look at the larger EU Treaty objectives, such as Article 11, TFEU, the ‘environmental integration rule’? To offer the background and need for this debate, section 2 presents a brief over view of the European Commission’s decisions in Chem China and Syngenta, Dow and Du Pont, Bayer and Monsanto. Section 3 identifies how ‘sustainability initiatives’ can be and in fact need to be taken account of in EU merger control. Section 4 concludes.

## 2 EUROPEAN COMMISSION IN DOW AND DU PONT, CHEM CHINA AND SYNGENTA AND BAYER AND MONSANTO: FROM ‘GIANT’ SIX –TO– ‘GOLIATH’ FOUR

Three recent notable mergers in the food and agro-chemical industry have reduced the number of effective competitors from six-to-four. Each one of these transactions, following a detailed Phase II review, received the Commission’s conditional clearance. This section briefly summarizes the European Commission’s findings and remedies in each one of these mergers.<sup>7</sup>

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<sup>4</sup> United Nations’ Sustainable Development Goals, available at <https://www.un.org/sustainabledevelopment/hunger/>. Accessed 8<sup>th</sup> June 2022.

<sup>5</sup> United Nations’ Sustainable Development Goals, available at <https://www.un.org/sustainabledevelopment/hunger/>. Accessed 8<sup>th</sup> June 2022.

<sup>6</sup> Editorial, The war in Ukraine is exposing gaps in the world’s food systems research (12 April 2022) Nature available here <https://www.nature.com/articles/d41586-022-00994-8>. Accessed 8<sup>th</sup> June 2022.

<sup>7</sup> This section offers a very broad overview of these three transactions. For a detailed legal analysis of these transactions, see Kalpana Tyagi, ‘6-to-4 Mergers in the Seed & Agro-Chem Industry: Unsustainable Challenges with the Current EU Merger Control Framework’ (forthcoming). Copy available with the author on request.

## 2.1 DOW/DU PONT<sup>8</sup>

Dow/DuPont was a 5-to-4 merger in the market for ‘crop protection innovation’. According to EU Merger Control Regulation 139/2004, the relevant test to assess the impact of a proposed transaction is the ‘significant impediment to effective competition’ (SIEC) test. According to the test, if the proposed concentration may create significant impediment through the creation or strengthening of a dominant position, it may be declared incompatible with the internal market. The transaction was expected to adversely affect the market for Agriculture (seed & crop protection), in other words “agrochem” and material sciences. The Commission assessed numerous sub-markets – for various seed and crop protection varieties. Considering the expected adverse effect on innovation competition, the Commission also assessed the impact of the transaction on the ‘innovation spaces’. The Commission came up with a novel test - ‘significant impediment to industry innovation’ (SIII) - to assess the impact of the concentration on the transaction.<sup>9</sup> The Commission’s assessment indicated that the parties were close competitors and competed ‘head-to-head’ in large number of ‘innovation spaces’ in the market for herbicides, insecticides and fungicides.<sup>10</sup>

To alleviate the Commission’s concerns, the parties divested DuPont’s global pesticide business and the global R&D organization to FMC, a leading generic player in the industry.

## 2.2 CHEMCHINA/SYNGENTA<sup>11</sup>

ChemChina/Syngenta was a merger between Chem China, a Chinese state owned enterprise active in the generics sector for agrochemical and Syngenta, Swiss-based innovator active along the entire value chain in the seed and crop protection segment. ChemChina also owned the Israel-based ADAMA, a leading generics player active in manufacturing and distribution of off-patent formulated agri products. Considering that it was a merger between an innovator and a generic, the Commission’s principle concerns related to off-patent crop protection products, and markets where there existed close competition between off-patent and patented products. The principle difference between the Commission’s approach in Dow/DuPont and ChemChina/Syngenta was the following. Whereas in Dow/DuPont, the Commission was equally concerned about both loss of product and innovation competition, in ChemChina/Syngenta, the Commission’s concerns were confined to the loss of competition in those sub-markets where the generics could exert ‘significant price

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<sup>8</sup> *Dow/DuPont* (CASE M.7932) [2017] OJ C 353/05.

<sup>9</sup> Nicolas Petit refers to this new theory as the ‘Significant Impediment to Industry Innovation’ (SIII Theory). For a detailed discussion and criticism of the same and how the Commission has departed from its earlier practice of concentrating on the identified relevant product markets, see Nicolas Petit, ‘Significant Impediment to Industry Innovation: A Novel Theory of Harm in EU Merger Control?’ (2017) *ICLLE Antitrust & Consumer Protection Research Program White Paper 2017-I* <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2911597](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2911597)>. Accessed 8<sup>th</sup> June 2022.

<sup>10</sup> For a detailed discussion on the law and economics of ‘innovation competition’ in these ‘innovation spaces’, see Alexandre Bertuzzi, Soledad Blanco Thomas, Daniel Coublucq, Johan Jonckheere, Julia Tew and Thomas Deisenhofer, ‘Dow/DuPont: Protecting Product and Innovation Competition’, (2017) *2 Competition Merger Brief 2/2017* – Article 1, 1-8.

<sup>11</sup> *ChemChina/Syngenta* (CASE M.7962) [2017] OJ C186/07.

competition on R&D players'.<sup>12</sup> Following a detailed econometric analysis, the Commission identified significant concerns in over 100+ relevant markets for fungicides, herbicides, insecticides, seed treatment and plant growth regulators markets.

To alleviate the Commission's concerns, the parties divested ADAMA and Syngenta's crop protection business in the fungicides, herbicides, insecticides, seed treatment and plant growth regulators, with a possibility to transfer the relevant R&D and regulatory staff along with the divested business.

### 2.3 BAYER/MONSANTO<sup>13</sup>

Bayer's US \$66 billion acquisition of US-based Monsanto was the biggest of the three transactions. The merger created the world's largest integrated player active in seeds and traits, pesticides and digital agriculture. Like the Dow/ DuPont merger, the Commission was concerned not only with the impact of the transaction on price, but also with the impact on the level of innovation. The Commission once again employed the above-referred SIII test to assess the impact of the transaction on the 'innovation spaces'. To win the Commission's approval, the parties proposed to divest \$6 billion worth of assets to BASF that comprised of crop seeds, traits, crop protection and agriculture and Bayer's global vegetable seeds business. The value of the divestment package itself was so substantial that it led to a separate merger notification as the BASF/Bayer Divestment Business.<sup>14</sup> This leads one to question whether just like in the banking sector, through these conditional approval decisions, the Commission is actually facilitating the creation of 'too big to fail' seed/agri businesses!<sup>15</sup> If the \$66 billion Bayer/Monsanto and the divestment package therein is any indicator, this clearly seems to be the case. It may be useful to add that these mergers can be considered 'too big to sustain'. The divestment packages in the Bayer/Monsanto<sup>16</sup> and Dow/DuPont<sup>17</sup> were so substantial that the parties were required to notify these divestitures as a separate transaction to receive the Commission's approval.

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<sup>12</sup> For the Commission's approach in ChemChina/Syngenta, see Jean-Christopher Mauger, Marco Ramandino, Laura Seritti and Jullien Sylvestre, 'ChemChina/Syngenta: When Growth is No Longer Organic' (2017) 2 *Competition Merger Brief 2/2017* – Article 2, 9-12.

<sup>13</sup> *Bayer/Monsanto* (CASE M.8084) [2018] OJ C459/10.

<sup>14</sup> *BASF/Bayer Divestment Business* (Case M.8851), available at <[https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=2\\_M\\_8851](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=2_M_8851)> accessed 30 August 2019.

<sup>15</sup> Angela Wigger and Hubert Buch-Hansen, 'Too Big to Control? The Politics of Mega-Mergers and Why the EU is not Stopping Them' (2017) *Corporate Europe Observatory* <<https://corporateeurope.org/en/power-lobbies/2017/06/too-big-control>>. Accessed 8<sup>th</sup> June 2022.

<sup>16</sup> *BASF/Bayer Divestment Business* (Case M.8851), available at <[https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=2\\_M\\_8851](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=2_M_8851)> accessed 08 June 2022

<sup>17</sup> *FMC/DuPont Divestment Business* (Case M.8435) available at <[https://ec.europa.eu/competition/mergers/cases/decisions/m8435\\_1101\\_3.pdf](https://ec.europa.eu/competition/mergers/cases/decisions/m8435_1101_3.pdf)> accessed 08 June 2022

### 3 RE-DEFINING THE SILHOUETTES OF EU MERGER CONTROL

Following are the three notable challenges that confront the global agriculture industry today: first, the need to increase the productivity, second, to ensure sustainable agricultural practices and third to enhance the resilience of the sector.<sup>18</sup> Against this background, one must also consider the impact of these M&As (mergers and acquisitions) on the R&D activities of small and medium-sized firms. Though evidence on innovation by big and small start-ups is mixed, following Arrow's line of argument, it emerges start-ups and SMEs may benefit more from disrupting the market, as it does not eat into their existing profits.<sup>19</sup> M&As also offer firms economies of scale and scope by attaining 'scale' and thereby, 'internalize' profits from 'complementary' R&D activities.<sup>20</sup> However, following this increase in concentration in the Agro-chem sector, the small and medium enterprises' (SMEs) ability to innovate are adversely impacted. Cross-licensing is a key input cost in the seed markets and post-consolidation, 'licensing of transgenic resource base in seeds' is likely to emerge as one of the most significant cost disadvantage for the small players in the sector. This can be explained on account of the following: SMEs have a small resource base, as distinct from the big Agro-chem players. As the follow-on innovation depends on the access to existing resources, many of which may be IP-protected, a smaller player is in an evident position of disadvantage when compared with the big incumbent Agro-chem players. This also puts them a weak bargaining position to enter any licensing agreement. In particular, the recent 6-to-4 mergers discussed in the section 2 above are susceptible to have a negative impact on the incentives of the big four to 'engage in pro-competitive R&D' by entering into agreements for cross-licensing of genetic traits.<sup>21</sup> The said report also goes on to allude to an uptake of such agreements.<sup>22</sup> This apparent inconsistency can be explained by transaction cost economics.<sup>23</sup> In an oligopolistic market, with a limited number of players, it is easier to negotiate and enter licensing agreements with relatively insignificant transaction costs. In none of the three the mergers did the Commission require the parties to enter into commitments that may encourage parties to form a patent pool or offer SMEs the possibility to cross-license these genetic traits. If at all, the remedies proposed only strengthened this closed group of big four (or big six)<sup>24</sup> global players, as the commitments comprised of divestiture to other existing market players.

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<sup>18</sup> OECD, Concentration in Seed Markets: Potential Effects and Policy Responses (2018) 15, OECD Publishing, Paris <<https://www.oecd.org/publications/concentration-in-seed-markets-9789264308367-en.htm>> accessed 2 September 2019.

<sup>19</sup> Kalpana Tyagi, Promoting Competition in Innovation through Merger Control in the ICT Sector: A Comparative and Interdisciplinary Study, *Springer* (2019) <<https://www.springer.com/gp/book/9783662587836>> pp. 143-49.

<sup>20</sup> Kalpana Tyagi, Promoting Competition in Innovation through Merger Control in the ICT Sector: A Comparative and Interdisciplinary Study, *Springer* (2019) <<https://www.springer.com/gp/book/9783662587836>> on unilateral effects at p. 47 ff.

<sup>21</sup> *Ibid.*, p. 18

<sup>22</sup> *Ibid.*, p. 19

<sup>23</sup> Roland H. Coase, The Nature of the Firm, available here <https://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.1937.tb00002.x> accessed 08 June 2022.

<sup>24</sup> The number of global players are four to six depending on whether one is looking only at the seeds, or agro-chemicals sector or the industrialized agriculture as a whole. See the graph in Angela Wigger and Hubert Buch-Hansen, 'Too Big to Control? The Politics of Mega-Mergers and Why the EU is not Stopping Them'

Furthermore, consolidation and industrialization of agriculture means that today, the big 4 entities not only have access to key inputs, but also data.<sup>25</sup> Therefore, the market today presents significant entry barriers to small and medium entrants in the sector. Additionally, it also adversely affects user innovation. Farmers have traditionally preserved the seeds, crossbred and re-planted them to get better and more sustainable yields. Monsanto's restrictive practices have been particularly infamous for nipping these innovation efforts of farmers by vigorously bringing patent infringement suits to prevent them from re-planting crops produced from its seeds.<sup>26</sup> According to a Center for Food Safety report, Monsanto has collected over \$23 million from 410 farmers and 56 small businesses in these infringement cases.<sup>27</sup> In another incident dating back to 2016, Monsanto illegally collected personal information and made a list of 600+ scientific, political and media personalities in order to influence their public position on *glyphosate*, a 'potentially carcinogen', used in Monsanto's best-selling Roundup.<sup>28</sup> These regrettable practices clearly underscore the danger of having 'too big to control'<sup>29</sup> seed and agri businesses. The Bayer/Monsanto merger alone invited a huge public outcry and the Commission received over 55,000 emails requesting the latter to prohibit the proposed merger, as the concentration posed significant risks to 'human health, food safety, consumer protection, the environment and the climate'.<sup>30</sup> The number of complaints is significant considering that the consumers are large in number and dispersed across 27 EU Member States. Despite the well-known problem of collective action, if the emails, tweets and letters to the Commission are any indication, this was 'the' merger that invited the clearest and most convincing call for prohibition from across the EU. Ironically enough, ignoring the voice of the stakeholders, who are also consumers, the Commission in the name of 'consumer welfare' conditionally cleared all the three mergers!

The very important question that arises against this complex interplay of 'sustainability' and 'EU merger control' is whether the current framework offers the possibility to take account of non-price parameters such as 'sustainability' and 'access to food'. Should the Commission continue to ignore issues of 'sustainability' and 'food security' in the name of the 'more economic approach'? If the Commission's own practice is any indicator, the impact of the proposed transaction or practice on the environment has been, on occasions, crucial

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(2017) *Corporate Europe Observatory* < <https://corporateeurope.org/en/power-lobbies/2017/06/too-big-control> > p. 7 accessed 02 September 2019.

<sup>25</sup> Ioannis Lianos and Claudio Lombardi, 'Superior Bargaining Power and the Global Food value Chain: The Wuthering Heights of Holistic Competition Law?' (2016) *Competition Law and Policy and the Food Value Chain: On-Topic Concurrences N°1-2016: 22-35* < <http://awa2017.concurrences.com/articles-awards/academic-articles-awards/article/superior-bargaining-power-and-the-global-food-value-chain-the-wuthering-heights> > accessed 2 September 2019.

<sup>26</sup> Paul Harris, 'Monsanto Sued Small Farmers to Protect Seed Patents, Report Says' *Guardian* (New York, 12 February 2013) < <https://www.theguardian.com/environment/2013/feb/12/monsanto-sues-farmers-seed-patents> > accessed 2 September 2019.

<sup>27</sup> *Ibid*; Center for Food Safety, 'Seed Giants vs. U.S. Farmers' (2013) <https://www.centerforfoodsafety.org/reports/1770/seed-giants-vs-us-farmers> accessed 08 June 2022.

<sup>28</sup> Stéphane Foucart, 'Fichier Monsanto » : des dizaines de personnalités classées illégalement selon leur position sur le glyphosate' *Le Monde* (Paris 19 June 2019) < [https://www.lemonde.fr/planete/article/2019/05/09/fichier-monsanto-des-dizaines-de-personnalites-classees-illegalement-selon-leur-position-sur-le-glyphosate\\_5460190\\_3244.html](https://www.lemonde.fr/planete/article/2019/05/09/fichier-monsanto-des-dizaines-de-personnalites-classees-illegalement-selon-leur-position-sur-le-glyphosate_5460190_3244.html) > accessed 08 June 2022.

<sup>29</sup> Angela Wigger and Hubert Buch-Hansen, 'Too Big to Control? The Politics of Mega-Mergers and Why the EU is not Stopping Them' (2017) *Corporate Europe Observatory* < <https://corporateeurope.org/en/power-lobbies/2017/06/too-big-control> > p. 7 accessed 08 June 2022.

<sup>30</sup> Bayer/Monsanto (CASE M.8084) [2018] OJ C459/10.

to the outcome of the case.<sup>31</sup> The Commission's clearance of the European manufacturers' agreement to improve the energy efficiency of electric motors is a notable example of this practice.<sup>32</sup> Looking at the Treaty articles and identifying the need to ensure that the founding treaties of the EU collectively must form a 'coherent system', Article 11 TFEU and Article 3(3) Treaty on European Union (TEU) are a guidepost.<sup>33</sup> Article 11 TFEU calls for need to 'integrate' the 'environmental protection requirements' in the Union's 'policies and activities'. Article 3(3) calls the Union to work for the 'sustainable development of Europe' based on a number of factors, including 'the quality of the environment'. 'Integration' of the 'environmental protection requirements' in order to promote 'sustainable development' within the meaning of Article 11 TFEU across different policy areas, including competition law, is also in alignment with the intention of the Member States as regards the interpretation of EU law.<sup>34</sup>

#### 4 CONCLUSION

The consolidation in the sector has significant implications not just for innovation, but also 'access to food', a basic human right and United Nations' Sustainable Development Goal (SDG) no.2 that is 'zero hunger'. Despite intense debate and raging criticism from academia and activists alike from across the disciplines and the industry, these mergers received clearance from all the competition authorities from across the world. Within the available framework, as section 2 highlights, the European Commission did a commendable job by assessing mergers against the tools currently available for the competitive assessment of mergers. In other words, the Commission well balanced the qualitative and quantitative evidence to assess the impact of these mergers on the parties' 'incentives to innovate'. These conditional clearances, in retrospect, effectively depict the Commission's assessment of these mergers. However, they also highlight that the Commission's current practice leaves a lot to be desired. The seeds and agro-chem industry today is operating well beyond Raworth's 'planetary boundaries' of a 'safe operating space for humanity'. There is thus the need to re-think, re-design and re-frame the notion of competition policy as a 'system of inter-locking processes' in the 'doughnut'.<sup>35</sup> For such a sustainability-driven thinking on innovation that re-directs the 'consumption choices available to consumers' within the sustainable 'safe and just space for humanity' there is a visible need to think and reflect upon the 'double limit of planetary boundaries' and incorporate this in the everyday philosophy of competition policy.<sup>36</sup> Sustainability – both in terms of production, consumption and leaving a 'green'

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<sup>31</sup> Suzanne Kingston, 'Integrating Environmental Protection and EU Competition Law: Why Competition Isn't Special' (November 2010) *European Law Journal*, Vol.16, No.6, 781.

<sup>32</sup> European Commission, Press Release: IP/00/508 Commission Clears European Manufacturers' Agreement to Improve Energy Efficiency of Electric Motors, Brussels 23 May 2000, <[https://europa.eu/rapid/press-release\\_IP-00-508\\_en.htm](https://europa.eu/rapid/press-release_IP-00-508_en.htm)> accessed 08 June 2022.

<sup>33</sup> For a discussion on the two Treaty articles, and how Article 11 TFEU may seem more promising, and possible tension with other Treaty articles such as Article 119 TFEU, see, Kingston (n 20) p. 784 ff.

<sup>34</sup> Julian Nowag, 'The Sky is the Limit: On the Drafting of Article 11 TFEU's Integration Obligation and Its Intended Reach' in Beate Sjøfjell and Anja Wiesbrock (eds), *The Greening of European Business under EU Law. Taking Article 11 TFEU Seriously* (Routledge 2014), available at <<https://www.taylorfrancis.com/books/e/9781315767864>> accessed 08 June 2022.

<sup>35</sup> Kate Raworth 'Why It's Time for Doughnut Economics' (2017) 24IPPR *Progressive Review* (3) 217-222.

<sup>36</sup> Tomaso Ferrando and Claudio Lombardi 'EU Competition Law and Sustainability in Food Systems: Addressing the Broken Links' (February 2019) *Fair Trade Advocacy Office, Brussels*



footprint as the discussion in section 3 underscores can be and needs to be incorporated in the EU merger control framework. Considering the significance of ‘sustainability-driven’ approach to innovation and development for a sustainable future, this short note attempted to highlight how Raworth’s doughnut can be a good benchmark if competition policy is assessed within the framework of the larger Treaty objectives. In other words, the Treaty principles should re-define the silhouettes of a reformed and more sustainable competition policy in general, and merger control framework in particular.

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